

SEQUENCE LISTING

<110> Yu, Xuanchuan
Miranda, Maricar

<120> Novel Human TEN-M4/cdz Proteins and Polynucleotides Encoding the Same

<130> LEX-0316-USA

<150> US 60/275,011

<151> 2001-03-12

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 8262

<212> DNA

<213> homo sapiens

<400> 1

```

atggacgtga aggagaggaa gccttaccgc tcgctgaccc ggcgccgcga cgccgagcgc 60
cgctacacca gctcgtccgc ggacagcgag gagggcaaag cccgcagaa atcgtaacgc 120
tcacgcgaga ccctgaaggc ctacgaccag gacgcccgc tagcctatgg cagccgcgtc 180
aaggacattg tgccgcagga ggccgaggaa ttctgcccga caggtgccaa cttcaccctg 240
cgggagctgg ggctggaaga agtaacgccc cctcacggga ccctgtaccg gacagacatt 300
ggcctccccc actgcggcta ctccatgggg gctggctctg atgccgacat ggaggctgac 360
acggtgctgt cccctgagca ccccgctgct ctgtggggcc ggagcacacg gtcagggcgc 420
agctcctgcc tgtccagccg ggccaattcc aatctcacac tcaccgacac cgagcatgaa 480
aacactgaga ctgatcatcc ggcgggcctg cagaaccacg cgcggctccg gacgccgcgc 540
ccgccgctct cgcacgcca ccccccaac cagcaccacg cggcctccat taactccctg 600
aaccggggca acttcacgcc gaggagcaac ccagcccgg cccccacgga ccactcgctc 660
tcgggagagc ccctgcccgg cgcgcccag gagcctgccc acgccagga gaactggctg 720
ctcaacagca acatccccct ggagaccaga aacctaggca agcagccatt cctagggaca 780
ttgcaggaca acctcattga gatggacatt ctggcgccct cccgccatga tggggcttac 840
agtgcagggc acttctctct caagcctgga ggcacctccc cgctcttctg caccacatca 900
ccaggggtacc cactgacgtc cagcacagtg tactctctc cgccccgacc cctgccccgc 960
agcaccttgc cccggccggc ctttaacctc aagaagccct ccaagtactg taactggaag 1020
tgcgagcccc tgagcgccat cgatcatctc gccactctg tcactcctg ggcatacttt 1080
gtggccatgc acctgttttg cctaaactgg cacctgcagc cgatggaggg gcagatgtat 1140
gagatcacgg aggacacagc cagcagttgg cctgtgccaa ccgacgtctc cctatacccc 1200
tcagggggca ctggcttaga gacccttgac aggaaaggca aaggaaccac agaaggaaag 1260
cccagtagtt tctttccaga ggacagtttc atagattctg gagaaattga tgtgggaagg 1320
cgagcttccc agaagattcc tcctggcact ttctggagat ctcaagtgtt catagacat 1380
cctgtgcatc tgaaattcaa tgtgtctctg ggaaaggcag ccctgggttg catttatggc 1440
agaaaaggcc tccctccttc acatacacag tttgactttg tggagctgct ggatggcagg 1500
aggctcctaa cccaggaggc gcgagacctg gaggggaccc cgcgccagtc tcgggggaact 1560
gtgccccctt ccagccatga gacaggcttc atccagtatt tggattcagg aatctggcac 1620
ttggcttttt acaatgacgg aaaggagtca gaagtggttt cttttctcac cactgccatt 1680
gagtcgggtg ataactgccc cagcaactgc tatggcaatg gtgactgcat ctctgggacc 1740
tgccactgct tcctgggttt cctgggcccc gactgtggca gacgctcctg ccccgctgctc 1800
tgtagcgga atggccaata catgaaaggc agatgcttgt gccacagtgg ctggaaaggc 1860
gctgagtcgg atgtgcccac caaccagtgt atcgatgtgg cctgcagcaa ccatggcacc 1920
tgcatcacgg gcacctgcat ctgcaacctt ggctacaagg gcgagagctg tgaggaagtg 1980

```


<400> 2

Met Asp Val Lys Glu Arg Lys Pro Tyr Arg Ser Leu Thr Arg Arg Arg
1 5 10 15
Asp Ala Glu Arg Arg Tyr Thr Ser Ser Ala Asp Ser Glu Glu Gly
20 25 30
Lys Ala Pro Gln Lys Ser Tyr Ser Ser Ser Glu Thr Leu Lys Ala Tyr
35 40 45
Asp Gln Asp Ala Arg Leu Ala Tyr Gly Ser Arg Val Lys Asp Ile Val
50 55 60
Pro Gln Glu Ala Glu Glu Phe Cys Arg Thr Gly Ala Asn Phe Thr Leu
65 70 75 80
Arg Glu Leu Gly Leu Glu Glu Val Thr Pro Pro His Gly Thr Leu Tyr
85 90 95
Arg Thr Asp Ile Gly Leu Pro His Cys Gly Tyr Ser Met Gly Ala Gly
100 105 110
Ser Asp Ala Asp Met Glu Ala Asp Thr Val Leu Ser Pro Glu His Pro
115 120 125
Val Arg Leu Trp Gly Arg Ser Thr Arg Ser Gly Arg Ser Ser Cys Leu
130 135 140
Ser Ser Arg Ala Asn Ser Asn Leu Thr Leu Thr Asp Thr Glu His Glu
145 150 155 160
Asn Thr Glu Thr Asp His Pro Gly Gly Leu Gln Asn His Ala Arg Leu
165 170 175
Arg Thr Pro Pro Pro Pro Leu Ser His Ala His Thr Pro Asn Gln His
180 185 190
His Ala Ala Ser Ile Asn Ser Leu Asn Arg Gly Asn Phe Thr Pro Arg
195 200 205
Ser Asn Pro Ser Pro Ala Pro Thr Asp His Ser Leu Ser Gly Glu Pro
210 215 220
Pro Ala Gly Gly Ala Gln Glu Pro Ala His Ala Gln Glu Asn Trp Leu
225 230 235 240
Leu Asn Ser Asn Ile Pro Leu Glu Thr Arg Asn Leu Gly Lys Gln Pro
245 250 255
Phe Leu Gly Thr Leu Gln Asp Asn Leu Ile Glu Met Asp Ile Leu Gly
260 265 270
Ala Ser Arg His Asp Gly Ala Tyr Ser Asp Gly His Phe Leu Phe Lys
275 280 285
Pro Gly Gly Thr Ser Pro Leu Phe Cys Thr Thr Ser Pro Gly Tyr Pro
290 295 300
Leu Thr Ser Ser Thr Val Tyr Ser Pro Pro Pro Arg Pro Leu Pro Arg
305 310 315 320
Ser Thr Phe Ala Arg Pro Ala Phe Asn Leu Lys Lys Pro Ser Lys Tyr
325 330 335
Cys Asn Trp Lys Cys Ala Ala Leu Ser Ala Ile Val Ile Ser Ala Thr
340 345 350
Leu Val Ile Leu Leu Ala Tyr Phe Val Ala Met His Leu Phe Gly Leu
355 360 365
Asn Trp His Leu Gln Pro Met Glu Gly Gln Met Tyr Glu Ile Thr Glu
370 375 380
Asp Thr Ala Ser Ser Trp Pro Val Pro Thr Asp Val Ser Leu Tyr Pro
385 390 395 400
Ser Gly Gly Thr Gly Leu Glu Thr Pro Asp Arg Lys Gly Lys Gly Thr
405 410 415
Thr Glu Gly Lys Pro Ser Ser Phe Phe Pro Glu Asp Ser Phe Ile Asp
420 425 430
Ser Gly Glu Ile Asp Val Gly Arg Arg Ala Ser Gln Lys Ile Pro Pro

1330	1335	1340
Ile Tyr Phe Val Asp Gly Thr Met Ile Arg Arg Ile Asp Gln Asn Gly		
1345	1350	1355
Ile Ile Ser Thr Leu Leu Gly Ser Asn Asp Leu Thr Ser Ala Arg Pro		1360
	1365	1370
Leu Ser Cys Asp Ser Val Met Asp Ile Ser Gln Val His Leu Glu Trp		1375
	1380	1385
Pro Thr Asp Leu Ala Ile Asn Pro Met Asp Asn Ser Leu Tyr Val Leu		1390
	1395	1400
Asp Asn Asn Val Val Leu Gln Ile Ser Glu Asn His Gln Val Arg Ile		1405
	1410	1415
Val Ala Gly Arg Pro Met His Cys Gln Val Pro Gly Ile Asp His Phe		1420
1425	1430	1435
Leu Leu Ser Lys Val Ala Ile His Ala Thr Leu Glu Ser Ala Thr Ala		1440
	1445	1450
Leu Ala Val Ser His Asn Gly Val Leu Tyr Ile Ala Glu Thr Asp Glu		1455
	1460	1465
Lys Lys Ile Asn Arg Ile Arg Gln Val Thr Thr Ser Gly Glu Ile Ser		1470
	1475	1480
Leu Val Ala Gly Ala Pro Ser Gly Cys Asp Cys Lys Asn Asp Ala Asn		1485
	1490	1495
Cys Asp Cys Phe Ser Gly Asp Asp Gly Tyr Ala Lys Asp Ala Lys Leu		1500
1505	1510	1515
Asn Thr Pro Ser Ser Leu Ala Val Cys Ala Asp Gly Glu Leu Tyr Val		1520
	1525	1530
Ala Asp Leu Gly Asn Ile Arg Ile Arg Phe Ile Arg Lys Asn Lys Pro		1535
	1540	1545
Phe Leu Asn Thr Gln Asn Met Tyr Glu Leu Ser Ser Pro Ile Asp Gln		1550
	1555	1560
Glu Leu Tyr Leu Phe Asp Thr Thr Gly Lys His Leu Tyr Thr Gln Ser		1565
	1570	1575
Leu Pro Thr Gly Asp Tyr Leu Tyr Asn Phe Thr Tyr Thr Gly Asp Gly		1580
1585	1590	1595
Asp Ile Thr Leu Ile Thr Asp Asn Asn Gly Asn Met Val Asn Val Arg		1600
	1605	1610
Arg Asp Ser Thr Gly Met Pro Leu Trp Leu Val Val Pro Asp Gly Gln		1615
	1620	1625
Val Tyr Trp Val Thr Met Gly Thr Asn Ser Ala Leu Lys Ser Val Thr		1630
	1635	1640
Thr Gln Gly His Glu Leu Ala Met Met Thr Tyr His Gly Asn Ser Gly		1645
	1650	1655
Leu Leu Ala Thr Lys Ser Asn Glu Asn Gly Trp Thr Thr Phe Tyr Glu		1660
1665	1670	1675
Tyr Asp Ser Phe Gly Arg Leu Thr Asn Val Thr Phe Pro Thr Gly Gln		1680
	1685	1690
Val Ser Ser Phe Arg Ser Asp Thr Asp Ser Ser Val His Val Gln Val		1695
	1700	1705
Glu Thr Ser Ser Lys Asp Asp Val Thr Ile Thr Thr Asn Leu Ser Ala		1710
	1715	1720
Ser Gly Ala Phe Tyr Thr Leu Leu Gln Asp Gln Val Arg Asn Ser Tyr		1725
	1730	1735
Tyr Ile Gly Ala Asp Gly Ser Leu Arg Leu Leu Leu Ala Asn Gly Met		1740
1745	1750	1755
Glu Val Ala Leu Gln Thr Glu Pro His Leu Leu Ala Gly Thr Val Asn		1760
	1765	1770
Pro Thr Val Gly Lys Arg Asn Val Thr Leu Pro Ile Asp Asn Gly Leu		1775

1780					1785					1790					
Asn	Leu	Val	Glu	Trp	Arg	Gln	Arg	Lys	Glu	Gln	Ala	Arg	Gly	Gln	Val
1795					1800					1805					
Thr	Val	Phe	Gly	Arg	Arg	Leu	Arg	Val	His	Asn	Arg	Asn	Leu	Leu	Ser
1810					1815					1820					
Leu	Asp	Phe	Asp	Arg	Val	Thr	Arg	Thr	Glu	Lys	Ile	Tyr	Asp	Asp	His
1825					1830					1835					
Arg	Lys	Phe	Thr	Leu	Arg	Ile	Leu	Tyr	Asp	Gln	Ala	Gly	Arg	Pro	Ser
1845					1850					1855					
Leu	Trp	Ser	Pro	Ser	Ser	Arg	Leu	Asn	Gly	Val	Asn	Val	Thr	Tyr	Ser
1860					1865					1870					
Pro	Gly	Gly	Tyr	Ile	Ala	Gly	Ile	Gln	Arg	Gly	Ile	Met	Ser	Glu	Arg
1875					1880					1885					
Met	Glu	Tyr	Asp	Gln	Ala	Gly	Arg	Ile	Thr	Ser	Arg	Ile	Phe	Ala	Asp
1890					1895					1900					
Gly	Lys	Thr	Trp	Ser	Tyr	Thr	Tyr	Leu	Glu	Lys	Ser	Met	Val	Leu	Leu
1905					1910					1915					
Leu	His	Ser	Gln	Arg	Gln	Tyr	Ile	Phe	Glu	Phe	Asp	Lys	Asn	Asp	Arg
1925					1930					1935					
Leu	Ser	Ser	Val	Thr	Met	Pro	Asn	Val	Ala	Arg	Gln	Thr	Leu	Glu	Thr
1940					1945					1950					
Ile	Arg	Ser	Val	Gly	Tyr	Tyr	Arg	Asn	Ile	Tyr	Gln	Pro	Pro	Glu	Gly
1955					1960					1965					
Asn	Ala	Ser	Val	Ile	Gln	Asp	Phe	Thr	Glu	Asp	Gly	His	Leu	Leu	His
1970					1975					1980					
Thr	Phe	Tyr	Leu	Gly	Thr	Gly	Arg	Arg	Val	Ile	Tyr	Lys	Tyr	Gly	Lys
1985					1990					1995					
Leu	Ser	Lys	Leu	Ala	Glu	Thr	Leu	Tyr	Asp	Thr	Thr	Lys	Val	Ser	Phe
2005					2010					2015					
Thr	Tyr	Asp	Glu	Thr	Ala	Gly	Met	Leu	Lys	Thr	Ile	Asn	Leu	Gln	Asn
2020					2025					2030					
Glu	Gly	Phe	Thr	Cys	Thr	Ile	Arg	Tyr	Arg	Gln	Ile	Gly	Pro	Leu	Ile
2035					2040					2045					
Asp	Arg	Gln	Ile	Phe	Arg	Phe	Thr	Glu	Glu	Gly	Met	Val	Asn	Ala	Arg
2050					2055					2060					
Phe	Asp	Tyr	Asn	Tyr	Asp	Asn	Ser	Phe	Arg	Val	Thr	Ser	Met	Gln	Ala
2065					2070					2075					
Val	Ile	Asn	Glu	Thr	Pro	Leu	Pro	Ile	Asp	Leu	Tyr	Arg	Tyr	Asp	Asp
2085					2090					2095					
Val	Ser	Gly	Lys	Thr	Glu	Gln	Phe	Gly	Lys	Phe	Gly	Val	Ile	Tyr	Tyr
2100					2105					2110					
Asp	Ile	Asn	Gln	Ile	Ile	Thr	Thr	Ala	Val	Met	Thr	His	Thr	Lys	His
2115					2120					2125					
Phe	Asp	Ala	Tyr	Gly	Arg	Met	Lys	Glu	Val	Gln	Tyr	Glu	Ile	Phe	Arg
2130					2135					2140					
Ser	Leu	Met	Tyr	Trp	Met	Thr	Val	Gln	Tyr	Asp	Asn	Met	Gly	Arg	Val
2145					2150					2155					
Val	Lys	Lys	Glu	Leu	Lys	Val	Gly	Pro	Tyr	Ala	Asn	Thr	Thr	Arg	Tyr
2165					2170					2175					
Ser	Tyr	Glu	Tyr	Asp	Ala	Asp	Gly	Gln	Leu	Gln	Thr	Val	Ser	Ile	Asn
2180					2185					2190					
Asp	Lys	Pro	Leu	Trp	Arg	Tyr	Ser	Tyr	Asp	Leu	Asn	Gly	Asn	Leu	His
2195					2200					2205					
Leu	Leu	Ser	Pro	Gly	Asn	Ser	Ala	Arg	Leu	Thr	Pro	Leu	Arg	Tyr	Asp
2210					2215					2220					
Ile	Arg	Asp	Arg	Ile	Thr	Arg	Leu	Gly	Asp	Val	Gln	Tyr	Lys	Met	Asp

2225	2230	2235	2240
Glu Asp Gly Phe Leu Arg Gln Arg Gly Gly Asp Ile Phe Glu Tyr Asn			
	2245	2250	2255
Ser Ala Gly Leu Leu Ile Lys Ala Tyr Asn Arg Ala Gly Ser Trp Ser			
	2260	2265	2270
Val Arg Tyr Arg Tyr Asp Gly Leu Gly Arg Arg Val Ser Ser Lys Ser			
	2275	2280	2285
Ser His Ser His His Leu Gln Phe Phe Tyr Ala Asp Leu Thr Asn Pro			
	2290	2295	2300
Thr Lys Val Thr His Leu Tyr Asn His Ser Ser Ser Glu Ile Thr Ser			
2305	2310	2315	2320
Leu Tyr Tyr Asp Leu Gln Gly His Leu Phe Ala Met Glu Leu Ser Ser			
	2325	2330	2335
Gly Asp Glu Phe Tyr Ile Ala Cys Asp Asn Ile Gly Thr Pro Leu Ala			
	2340	2345	2350
Val Phe Ser Gly Thr Gly Leu Met Ile Lys Gln Ile Leu Tyr Thr Ala			
	2355	2360	2365
Tyr Gly Glu Ile Tyr Met Asp Thr Asn Pro Asn Phe Gln Ile Ile Ile			
	2370	2375	2380
Gly Tyr His Gly Gly Leu Tyr Asp Pro Leu Thr Lys Leu Val His Met			
2385	2390	2395	2400
Gly Arg Arg Asp Tyr Asp Val Leu Ala Gly Arg Trp Thr Ser Pro Asp			
	2405	2410	2415
His Glu Leu Trp Lys His Leu Ser Ser Ser Asn Val Met Pro Phe Asn			
	2420	2425	2430
Leu Tyr Met Phe Lys Asn Asn Asn Pro Ile Ser Asn Ser Gln Asp Ile			
	2435	2440	2445
Lys Cys Phe Met Thr Asp Val Asn Ser Trp Leu Leu Thr Phe Gly Phe			
	2450	2455	2460
Gln Leu His Asn Val Ile Pro Gly Tyr Pro Lys Pro Asp Met Asp Ala			
2465	2470	2475	2480
Met Glu Pro Ser Tyr Glu Leu Ile His Thr Gln Met Lys Thr Gln Glu			
	2485	2490	2495
Trp Asp Asn Ser Lys Ser Ile Leu Gly Val Gln Cys Glu Val Gln Lys			
	2500	2505	2510
Gln Leu Lys Ala Phe Val Thr Leu Glu Arg Phe Asp Gln Leu Tyr Gly			
	2515	2520	2525
Ser Thr Ile Thr Ser Cys Gln Gln Ala Pro Lys Thr Lys Lys Phe Ala			
	2530	2535	2540
Ser Ser Gly Ser Val Phe Gly Lys Gly Val Lys Phe Ala Leu Lys Asp			
2545	2550	2555	2560
Gly Arg Val Thr Thr Asp Ile Ile Ser Val Ala Asn Glu Asp Gly Arg			
	2565	2570	2575
Arg Val Ala Ala Ile Leu Asn His Ala His Tyr Leu Glu Asn Leu His			
	2580	2585	2590
Phe Thr Ile Asp Gly Val Asp Thr His Tyr Phe Val Lys Pro Gly Pro			
	2595	2600	2605
Ser Glu Gly Asp Leu Ala Ile Leu Gly Leu Ser Gly Gly Arg Arg Thr			
	2610	2615	2620
Leu Glu Asn Gly Val Asn Val Thr Val Ser Gln Ile Asn Thr Val Leu			
2625	2630	2635	2640
Asn Gly Arg Thr Arg Arg Tyr Thr Asp Ile Gln Leu Gln Tyr Gly Ala			
	2645	2650	2655
Leu Cys Leu Asn Thr Arg Tyr Gly Thr Thr Leu Asp Glu Glu Lys Ala			
	2660	2665	2670
Arg Val Leu Glu Leu Ala Arg Gln Arg Ala Val Arg Gln Ala Trp Ala			

2675	2680	2685
Arg Glu Gln Gln Arg Leu Arg Glu Gly Glu Glu Gly Leu Arg Ala Trp		
2690	2695	2700
Thr Glu Gly Glu Lys Gln Gln Val Leu Ser Thr Gly Arg Val Gln Gly		
2705	2710	2715
Tyr Asp Gly Phe Phe Val Ile Ser Val Glu Gln Tyr Pro Glu Leu Ser		
2725	2730	2735
Asp Ser Ala Asn Asn Ile His Phe Met Arg Gln Ser Glu Met Gly Arg		
2740	2745	2750
Arg		

<210> 3
 <211> 4875
 <212> DNA
 <213> homo sapiens

<400> 3

atggacgtga	aggagaggaa	gccttaccgc	tcgctgaccc	ggcgccgcga	cgccgagcgc	60
cgctacacca	gctcgtccgc	ggacagcgag	gagggcaaag	ccccgcagaa	atcgtaacagc	120
tccagcgaga	ccctgaaggc	ctacgaccag	gacgcccgc	tagcctatgg	cagccgcgtc	180
aaggacattg	tgccgcagga	ggccgaggaa	ttctgccgca	caggtgccaa	cttcaccctg	240
cgggagctgg	ggctggaaga	agtaacgccc	cctcacggga	ccctgtaccg	gacagacatt	300
ggcctcccc	actgcggcta	ctccatgggg	gctggctctg	atgccgacat	ggaggctgac	360
acgggtgctgt	cccctgagca	ccccgtgcgt	ctgtggggcc	ggagcacacg	gtcagggcgc	420
agctcctgcc	tgtccagccg	ggccaattcc	aatctcacac	tcaccgacac	cgagcatgaa	480
aacactgaga	ctgatcatcc	ggcgggcctg	cagaaccacg	cgcggtcccg	gacgccgcgc	540
ccgcccgtct	cgcacgcccc	cacccccaac	cagcaccacg	cggcctccat	taactccctg	600
aaccggggca	acttcacgcc	gaggagcaac	cccagcccgg	ccccacgga	ccactcgtc	660
tccggagagc	cccctgccgg	cggcgcccag	gagcctgccc	acgcccagga	gaactggctg	720
ctcaacagca	acatccccct	ggagaccaga	aacctaggca	agcagccatt	cctagggaca	780
ttgcaggaca	acctcattga	gatggacatt	ctcggcgct	cccgccatga	tggggcttac	840
agtgcggggc	acttcctctt	caagcctgga	ggcacctccc	cgctcttctg	caccacatca	900
ccagggtagc	cactgacgtc	cagcacagtg	tactctcctc	cgccccgacc	cctgccccgc	960
agcaccttcg	ccgggcccgc	ctttaacctc	aagaagccct	ccaagtactg	taactggaag	1020
tgcgagccc	tgagcgccat	cgctcatctc	gccactctgg	tcactctgct	ggcatacttt	1080
gtggccatgc	acctgtttgg	cctaaactgg	cacctgcagc	cgatggaggg	gcagatgtat	1140
gagatcacgg	aggacacagc	cagcagttgg	ctgtgcca	ccgacgtctc	cctatacccc	1200
tcagggggca	ctggcttaga	gacccctgac	aggaaaggca	aaggaaccac	agaaggaaaag	1260
cccagtagtt	tctttccaga	ggacagtttc	atagattctg	gagaaattga	tgtgggaagg	1320
cgagcttccc	agaagattcc	tcctggcact	ttctggagat	ctcaagtgtt	catagaccat	1380
cctgtgcata	tgaaattcaa	tgtgtctctg	ggaaaggcag	ccctgggttg	catttatggc	1440
agaaaaggcc	tccctccttc	acatacacag	tttgactttg	tggagctgct	ggatggcagg	1500
aggctcctaa	cccaggaggc	gcggagccta	gaggggaccc	cgcgccagtc	tcggggaact	1560
gtgccccct	ccagccatga	gacaggcttc	atccagtatt	tggattcagg	aatctggcac	1620
ttggcttttt	acaatgacgg	aaaggagtca	gaagtggttt	cctttctcac	cactgccatt	1680
gagtcgggtg	ataactgccc	cagcaactgc	tatggcaatg	gtgactgcat	ctctggggacc	1740
tgccactgct	tcctgggttt	cctggggccc	gactgtggca	gagcctcctg	ccccgtgctc	1800
tgtagcggaa	atggccaata	catgaaaggc	agatgcttgt	gccacagtgg	ctggaaaggc	1860
gctgagtgcg	atgtgcccac	caaccagtgt	atcgatgtgg	cctgcagcaa	ccatggcacc	1920
tgcatcacgg	gcacctgcat	ctgcaaccct	ggctacaagg	gcgagagctg	tgaggaagtg	1980
gactgcattg	acccacatg	ttcaggccgg	ggtgtctgcg	tgagaggcga	atgccactgc	2040
tctgtgggat	ggggaggcac	caactgcgag	accccagggg	ccacatgctt	agaccagtgt	2100
tcaggccacg	gaaccttctt	cccggacacc	gggctttgca	gctgtgaccc	aagctggact	2160
ggacacgact	gttctatcga	gatctgtgct	gccgactgtg	gtggccatgg	cgtgtgcgta	2220

```

ggggggcacct gccgctgcga ggatggctgg atgggggcag cctgcgacca gcgggcctgc 2280
caccgcgcgt gtgccgagca tgggacctgc cgcgacggca agtgcgagtg cagccctggc 2340
tggaatggcg aacactgcac catcgagggt tgccttgggt tgtgcaatgg caacggcaga 2400
tgtaccttag acctgaatgg ttggcactgc gtctgccagc tgggctggag aggagctggc 2460
tgtgacctt ccatggagac tgcttgcgtt gacagcaaag acaatgatgg agatggcctg 2520
gtggactgca tggaccttga ctgctgcctc cagccctgtt gccatatcaa cccgctgtgc 2580
cttggctccc ctaaccctct ggacatcatc caggagacac aggtccctgt gtcacagcag 2640
aacctacact ccttctatga ccgcatcaag ttcctcgtgg gcagggacag cacgcacata 2700
atccccgggg agaaccctt tgatggaggg catgcttggt ttattcgtgg ccaagtgatg 2760
acatcagatg gaacccccct ggttgggtgt aacatcagtt ttgtcaataa ccctctcttt 2820
ggatatacaa tcagcaggca agatggcagc tttgacttgg tgacaaatgg cggcatctcc 2880
atcatcctgc ggttcgagcg ggcacctttc atcacacagg agcacaccct gtggctgcca 2940
tgggatcgct tctttgtcat ggaaaccatc atcatgagac atgaggagaa tgagattccc 3000
agctgtgacc tgagcaattt tgcgcgcctc aaccagtcg tctctccatc cccactgacg 3060
tccttcgcca gctcctgtgc agagaaaggc ccattgtgtc cggaaattca ggctttgcag 3120
gaggaaatct ctatctctgg ctgcaagatg aggtgagct acctgagcag ccggaccctt 3180
ggctacaaat ctgtcctgag gatcagcctc accaccgga ccatccctt caacctcatg 3240
aaggtgcacc tcatggtagc ggtggagggc cgcctcttca ggaagtgggt cgctgcagcc 3300
ccagacctgt cctattattt catttgggac aagacagacg tctacaacca gaaggtgttt 3360
gggctttcag aagcctttgt ttccgtgggt tatgaatatg aatcctgcc cagatctaata 3420
ctgtgggaaa aaagaacaac agtgcctgag ggctatgaaa ttgacgcgtc caagcttgga 3480
ggatggagcc tagacaaaca tcattgccctc aacattcaaa gtggcatcct gcacaaaggg 3540
aatggggaga accagtttgt gtctcagcag cctcctgtca ttgggagcat catgggcaat 3600
gggcgcgcga gaagcatctc ctgccccagc tgcaacggcc ttgctgacgg caacaagctc 3660
ctggccccag tggccctcac ctgtggctct gacgggagcc tctatgtggg tgatttcaac 3720
tacattagaa ggatcttccc ctctggaaat gtcaccaaca tcctagagct gagtccacag 3780
ccagcacaca aatactacct ggccacagac cccatgagtg gggccgtctt cctttctgac 3840
agcaacagcc ggccgggtctt taaaaatcaag tccactgtgg tggatgaagg ccttgtcaag 3900
aactctgagg tgggtgcggg gacaggtgac cagtgcctcc cctttgatga cactcgctgc 3960
ggggatggtg ggaaggccac agaagccaca ctcaccaatc ccaggggcat tacagtggac 4020
aagtttgggc tgatctactt cgtggatggc accatgatca gacgcacga tcagaatggg 4080
atcatctcca cctgctcgg ctctaatgat ctcacatcag cccggccact cagctgtgat 4140
tctgtcatgg atatttccca ggttcacctg gagtggccca cagacttagc catcaacca 4200
atggacaact cactttatgt cctcgacaac aatgtggtcc tgcaaatctc tgaaaaccac 4260
caggtgcgca ttgtgcgcgg gaggcccatg cactgccagg tccctggcat tgaccacttc 4320
ctgctaagca aggtggccat ccacgcaacc ctggagtcag ccaccgctt ggctgtttca 4380
cacaatgggg tctgtatat tgctgagact gatgagaaaa agatcaaccg catcaggcag 4440
gtcaccacta gtggagagat ctactcgtt gctggggccc ccagtggctg tgactgtaa 4500
aatgatgcca actgtgatt ttttctgga gacgatgggt atgccaagga tgcaaagta 4560
aataccccat cttccttggc tgtgtgtgt gctggggagc tctacgtggc cgaccttggg 4620
aacatccgaa ttcggtttat ccggaagaac aagcctttcc tcaacacca gaacatgtat 4680
gagctgtctt caccaattga ccaggagctc tatctgtttg ataccaccgg caagcacctg 4740
tacacccaaa gctgcccac aggagactac ctgtacaact tcacctacac tggggacggc 4800
gacatcacac tcatcacaga caacaatggc aacatggtaa atgtccgccc agactctact 4860
gggatgcccc tctga 4875

```

<210> 4
 <211> 1624
 <212> PRT
 <213> homo sapiens

<400> 4
 Met Asp Val Lys Glu Arg Lys Pro Tyr Arg Ser Leu Thr Arg Arg Arg
 1 5 10 15
 Asp Ala Glu Arg Arg Tyr Thr Ser Ser Ser Ala Asp Ser Glu Glu Gly
 20 25 30

Lys	Ala	Pro	Gln	Lys	Ser	Tyr	Ser	Ser	Ser	Glu	Thr	Leu	Lys	Ala	Tyr	35	40	45
Asp	Gln	Asp	Ala	Arg	Leu	Ala	Tyr	Gly	Ser	Arg	Val	Lys	Asp	Ile	Val	50	55	60
Pro	Gln	Glu	Ala	Glu	Glu	Phe	Cys	Arg	Thr	Gly	Ala	Asn	Phe	Thr	Leu	65	70	75
Arg	Glu	Leu	Gly	Leu	Glu	Glu	Val	Thr	Pro	Pro	His	Gly	Thr	Leu	Tyr	85	90	95
Arg	Thr	Asp	Ile	Gly	Leu	Pro	His	Cys	Gly	Tyr	Ser	Met	Gly	Ala	Gly	100	105	110
Ser	Asp	Ala	Asp	Met	Glu	Ala	Asp	Thr	Val	Leu	Ser	Pro	Glu	His	Pro	115	120	125
Val	Arg	Leu	Trp	Gly	Arg	Ser	Thr	Arg	Ser	Gly	Arg	Ser	Ser	Cys	Leu	130	135	140
Ser	Ser	Arg	Ala	Asn	Ser	Asn	Leu	Thr	Leu	Thr	Asp	Thr	Glu	His	Glu	145	150	155
Asn	Thr	Glu	Thr	Asp	His	Pro	Gly	Gly	Leu	Gln	Asn	His	Ala	Arg	Leu	165	170	175
Arg	Thr	Pro	Pro	Pro	Pro	Leu	Ser	His	Ala	His	Thr	Pro	Asn	Gln	His	180	185	190
His	Ala	Ala	Ser	Ile	Asn	Ser	Leu	Asn	Arg	Gly	Asn	Phe	Thr	Pro	Arg	195	200	205
Ser	Asn	Pro	Ser	Pro	Ala	Pro	Thr	Asp	His	Ser	Leu	Ser	Gly	Glu	Pro	210	215	220
Pro	Ala	Gly	Gly	Ala	Gln	Glu	Pro	Ala	His	Ala	Gln	Glu	Asn	Trp	Leu	225	230	235
Leu	Asn	Ser	Asn	Ile	Pro	Leu	Glu	Thr	Arg	Asn	Leu	Gly	Lys	Gln	Pro	245	250	255
Phe	Leu	Gly	Thr	Leu	Gln	Asp	Asn	Leu	Ile	Glu	Met	Asp	Ile	Leu	Gly	260	265	270
Ala	Ser	Arg	His	Asp	Gly	Ala	Tyr	Ser	Asp	Gly	His	Phe	Leu	Phe	Lys	275	280	285
Pro	Gly	Gly	Thr	Ser	Pro	Leu	Phe	Cys	Thr	Thr	Ser	Pro	Gly	Tyr	Pro	290	295	300
Leu	Thr	Ser	Ser	Thr	Val	Tyr	Ser	Pro	Pro	Pro	Arg	Pro	Leu	Pro	Arg	305	310	315
Ser	Thr	Phe	Ala	Arg	Pro	Ala	Phe	Asn	Leu	Lys	Lys	Pro	Ser	Lys	Tyr	325	330	335
Cys	Asn	Trp	Lys	Cys	Ala	Ala	Leu	Ser	Ala	Ile	Val	Ile	Ser	Ala	Thr	340	345	350
Leu	Val	Ile	Leu	Leu	Ala	Tyr	Phe	Val	Ala	Met	His	Leu	Phe	Gly	Leu	355	360	365
Asn	Trp	His	Leu	Gln	Pro	Met	Glu	Gly	Gln	Met	Tyr	Glu	Ile	Thr	Glu	370	375	380
Asp	Thr	Ala	Ser	Ser	Trp	Pro	Val	Pro	Thr	Asp	Val	Ser	Leu	Tyr	Pro	385	390	395
Ser	Gly	Gly	Thr	Gly	Leu	Glu	Thr	Pro	Asp	Arg	Lys	Gly	Lys	Gly	Thr	405	410	415
Thr	Glu	Gly	Lys	Pro	Ser	Ser	Phe	Phe	Pro	Glu	Asp	Ser	Phe	Ile	Asp	420	425	430
Ser	Gly	Glu	Ile	Asp	Val	Gly	Arg	Arg	Ala	Ser	Gln	Lys	Ile	Pro	Pro	435	440	445
Gly	Thr	Phe	Trp	Arg	Ser	Gln	Val	Phe	Ile	Asp	His	Pro	Val	His	Leu	450	455	460
Lys	Phe	Asn	Val	Ser	Leu	Gly	Lys	Ala	Ala	Leu	Val	Gly	Ile	Tyr	Gly	465	470	475
																		480

Arg	Lys	Gly	Leu	Pro	Pro	Ser	His	Thr	Gln	Phe	Asp	Phe	Val	Glu	Leu		
				485					490					495			
Leu	Asp	Gly	Arg	Arg	Leu	Leu	Thr	Gln	Glu	Ala	Arg	Ser	Leu	Glu	Gly		
			500					505					510				
Thr	Pro	Arg	Gln	Ser	Arg	Gly	Thr	Val	Pro	Pro	Ser	Ser	His	Glu	Thr		
		515					520					525					
Gly	Phe	Ile	Gln	Tyr	Leu	Asp	Ser	Gly	Ile	Trp	His	Leu	Ala	Phe	Tyr		
	530					535					540						
Asn	Asp	Gly	Lys	Glu	Ser	Glu	Val	Val	Ser	Phe	Leu	Thr	Thr	Ala	Ile		
545					550					555					560		
Glu	Ser	Val	Asp	Asn	Cys	Pro	Ser	Asn	Cys	Tyr	Gly	Asn	Gly	Asp	Cys		
				565					570					575			
Ile	Ser	Gly	Thr	Cys	His	Cys	Phe	Leu	Gly	Phe	Leu	Gly	Pro	Asp	Cys		
			580					585					590				
Gly	Arg	Ala	Ser	Cys	Pro	Val	Leu	Cys	Ser	Gly	Asn	Gly	Gln	Tyr	Met		
		595					600					605					
Lys	Gly	Arg	Cys	Leu	Cys	His	Ser	Gly	Trp	Lys	Gly	Ala	Glu	Cys	Asp		
	610					615					620						
Val	Pro	Thr	Asn	Gln	Cys	Ile	Asp	Val	Ala	Cys	Ser	Asn	His	Gly	Thr		
625					630					635					640		
Cys	Ile	Thr	Gly	Thr	Cys	Ile	Cys	Asn	Pro	Gly	Tyr	Lys	Gly	Glu	Ser		
				645					650					655			
Cys	Glu	Glu	Val	Asp	Cys	Met	Asp	Pro	Thr	Cys	Ser	Gly	Arg	Gly	Val		
			660					665					670				
Cys	Val	Arg	Gly	Glu	Cys	His	Cys	Ser	Val	Gly	Trp	Gly	Gly	Thr	Asn		
		675					680					685					
Cys	Glu	Thr	Pro	Arg	Ala	Thr	Cys	Leu	Asp	Gln	Cys	Ser	Gly	His	Gly		
		690				695					700						
Thr	Phe	Leu	Pro	Asp	Thr	Gly	Leu	Cys	Ser	Cys	Asp	Pro	Ser	Trp	Thr		
705					710					715					720		
Gly	His	Asp	Cys	Ser	Ile	Glu	Ile	Cys	Ala	Ala	Asp	Cys	Gly	Gly	His		
				725					730					735			
Gly	Val	Cys	Val	Gly	Gly	Thr	Cys	Arg	Cys	Glu	Asp	Gly	Trp	Met	Gly		
			740					745					750				
Ala	Ala	Cys	Asp	Gln	Arg	Ala	Cys	His	Pro	Arg	Cys	Ala	Glu	His	Gly		
		755					760					765					
Thr	Cys	Arg	Asp	Gly	Lys	Cys	Glu	Cys	Ser	Pro	Gly	Trp	Asn	Gly	Glu		
		770				775					780						
His	Cys	Thr	Ile	Glu	Gly	Cys	Pro	Gly	Leu	Cys	Asn	Gly	Asn	Gly	Arg		
785					790					795					800		
Cys	Thr	Leu	Asp	Leu	Asn	Gly	Trp	His	Cys	Val	Cys	Gln	Leu	Gly	Trp		
				805					810					815			
Arg	Gly	Ala	Gly	Cys	Asp	Thr	Ser	Met	Glu	Thr	Ala	Cys	Gly	Asp	Ser		
			820					825					830				
Lys	Asp	Asn	Asp	Gly	Asp	Gly	Leu	Val	Asp	Cys	Met	Asp	Pro	Asp	Cys		
		835					840					845					
Cys	Leu	Gln	Pro	Leu	Cys	His	Ile	Asn	Pro	Leu	Cys	Leu	Gly	Ser	Pro		
		850				855						860					
Asn	Pro	Leu	Asp	Ile	Ile	Gln	Glu	Thr	Gln	Val	Pro	Val	Ser	Gln	Gln		
865					870					875					880		
Asn	Leu	His	Ser	Phe	Tyr	Asp	Arg	Ile	Lys	Phe	Leu	Val	Gly	Arg	Asp		
				885					890					895			
Ser	Thr	His	Ile	Ile	Pro	Gly	Glu	Asn	Pro	Phe	Asp	Gly	Gly	His	Ala		
			900					905					910				
Cys	Val	Ile	Arg	Gly	Gln	Val	Met	Thr	Ser	Asp	Gly	Thr	Pro	Leu	Val		
		915					920						925				

Gly Val Asn Ile Ser Phe Val Asn Asn Pro Leu Phe Gly Tyr Thr Ile
 930 935 940
 Ser Arg Gln Asp Gly Ser Phe Asp Leu Val Thr Asn Gly Gly Ile Ser
 945 950 955 960
 Ile Ile Leu Arg Phe Glu Arg Ala Pro Phe Ile Thr Gln Glu His Thr
 965 970 975
 Leu Trp Leu Pro Trp Asp Arg Phe Phe Val Met Glu Thr Ile Ile Met
 980 985 990
 Arg His Glu Glu Asn Glu Ile Pro Ser Cys Asp Leu Ser Asn Phe Ala
 995 1000 1005
 Arg Pro Asn Pro Val Val Ser Pro Ser Pro Leu Thr Ser Phe Ala Ser
 1010 1015 1020
 Ser Cys Ala Glu Lys Gly Pro Ile Val Pro Glu Ile Gln Ala Leu Gln
 1025 1030 1035 1040
 Glu Glu Ile Ser Ile Ser Gly Cys Lys Met Arg Leu Ser Tyr Leu Ser
 1045 1050 1055
 Ser Arg Thr Pro Gly Tyr Lys Ser Val Leu Arg Ile Ser Leu Thr His
 1060 1065 1070
 Pro Thr Ile Pro Phe Asn Leu Met Lys Val His Leu Met Val Ala Val
 1075 1080 1085
 Glu Gly Arg Leu Phe Arg Lys Trp Phe Ala Ala Pro Asp Leu Ser
 1090 1095 1100
 Tyr Tyr Phe Ile Trp Asp Lys Thr Asp Val Tyr Asn Gln Lys Val Phe
 1105 1110 1115 1120
 Gly Leu Ser Glu Ala Phe Val Ser Val Gly Tyr Glu Tyr Glu Ser Cys
 1125 1130 1135
 Pro Asp Leu Ile Leu Trp Glu Lys Arg Thr Thr Val Leu Gln Gly Tyr
 1140 1145 1150
 Glu Ile Asp Ala Ser Lys Leu Gly Gly Trp Ser Leu Asp Lys His His
 1155 1160 1165
 Ala Leu Asn Ile Gln Ser Gly Ile Leu His Lys Gly Asn Gly Glu Asn
 1170 1175 1180
 Gln Phe Val Ser Gln Gln Pro Pro Val Ile Gly Ser Ile Met Gly Asn
 1185 1190 1195 1200
 Gly Arg Arg Arg Ser Ile Ser Cys Pro Ser Cys Asn Gly Leu Ala Asp
 1205 1210 1215
 Gly Asn Lys Leu Leu Ala Pro Val Ala Leu Thr Cys Gly Ser Asp Gly
 1220 1225 1230
 Ser Leu Tyr Val Gly Asp Phe Asn Tyr Ile Arg Arg Ile Phe Pro Ser
 1235 1240 1245
 Gly Asn Val Thr Asn Ile Leu Glu Leu Ser His Ser Pro Ala His Lys
 1250 1255 1260
 Tyr Tyr Leu Ala Thr Asp Pro Met Ser Gly Ala Val Phe Leu Ser Asp
 1265 1270 1275 1280
 Ser Asn Ser Arg Arg Val Phe Lys Ile Lys Ser Thr Val Val Val Lys
 1285 1290 1295
 Asp Leu Val Lys Asn Ser Glu Val Val Ala Gly Thr Gly Asp Gln Cys
 1300 1305 1310
 Leu Pro Phe Asp Asp Thr Arg Cys Gly Asp Gly Gly Lys Ala Thr Glu
 1315 1320 1325
 Ala Thr Leu Thr Asn Pro Arg Gly Ile Thr Val Asp Lys Phe Gly Leu
 1330 1335 1340
 Ile Tyr Phe Val Asp Gly Thr Met Ile Arg Arg Ile Asp Gln Asn Gly
 1345 1350 1355 1360
 Ile Ile Ser Thr Leu Leu Gly Ser Asn Asp Leu Thr Ser Ala Arg Pro
 1365 1370 1375

Leu Ser Cys Asp Ser Val Met Asp Ile Ser Gln Val His Leu Glu Trp
 1380 1385 1390
 Pro Thr Asp Leu Ala Ile Asn Pro Met Asp Asn Ser Leu Tyr Val Leu
 1395 1400 1405
 Asp Asn Asn Val Val Leu Gln Ile Ser Glu Asn His Gln Val Arg Ile
 1410 1415 1420
 Val Ala Gly Arg Pro Met His Cys Gln Val Pro Gly Ile Asp His Phe
 1425 1430 1435 1440
 Leu Leu Ser Lys Val Ala Ile His Ala Thr Leu Glu Ser Ala Thr Ala
 1445 1450 1455
 Leu Ala Val Ser His Asn Gly Val Leu Tyr Ile Ala Glu Thr Asp Glu
 1460 1465 1470
 Lys Lys Ile Asn Arg Ile Arg Gln Val Thr Thr Ser Gly Glu Ile Ser
 1475 1480 1485
 Leu Val Ala Gly Ala Pro Ser Gly Cys Asp Cys Lys Asn Asp Ala Asn
 1490 1495 1500
 Cys Asp Cys Phe Ser Gly Asp Asp Gly Tyr Ala Lys Asp Ala Lys Leu
 1505 1510 1515 1520
 Asn Thr Pro Ser Ser Leu Ala Val Cys Ala Asp Gly Glu Leu Tyr Val
 1525 1530 1535
 Ala Asp Leu Gly Asn Ile Arg Ile Arg Phe Ile Arg Lys Asn Lys Pro
 1540 1545 1550
 Phe Leu Asn Thr Gln Asn Met Tyr Glu Leu Ser Ser Pro Ile Asp Gln
 1555 1560 1565
 Glu Leu Tyr Leu Phe Asp Thr Thr Gly Lys His Leu Tyr Thr Gln Ser
 1570 1575 1580
 Leu Pro Thr Gly Asp Tyr Leu Tyr Asn Phe Thr Tyr Thr Gly Asp Gly
 1585 1590 1595 1600
 Asp Ile Thr Leu Ile Thr Asp Asn Asn Gly Asn Met Val Asn Val Arg
 1605 1610 1615
 Arg Asp Ser Thr Gly Met Pro Leu
 1620